

AMENDMENTS TO THE CLAIMS

1. - 24. (canceled)

25. (new) A process for removing contaminants from a natural gas feed stream containing water and sour species comprising: dehydrating the natural gas feed stream in a first vessel; removing from the first vessel a stream of dehydrated gas; cooling the dehydrated gas in a second vessel to a second operating temperature at which solids of the sour species are formed or at which the sour species dissolve in a liquid; and removing from the second vessel a stream of dehydrated sweetened gas.

26. (new) The process of claim 25 wherein dehydrating the natural gas feed stream comprises cooling the natural gas feed stream in the first vessel to a first operating temperature at which hydrates are formed.

27. (new) The process of claim 26 wherein cooling the natural gas feed stream comprises introducing the natural gas feed stream into the first vessel at a temperature that is below the first operating temperature.

28. (new) The process of claim 25 wherein cooling the dehydrated gas comprises introducing the dehydrated gas into the second vessel at a temperature that is below the second operating temperature.

29. (new) The process of claim 26 wherein cooling the natural gas feed stream comprises introducing the natural gas feed stream into the first vessel at a temperature that is below the first operating temperature, and cooling the dehydrated gas comprises introducing the dehydrated gas into the second vessel at a temperature that is below the second operating temperature.

30. (new) The process of claim 26 wherein cooling the natural gas feed stream comprises introducing the natural gas feed stream and a stream of liquid into the first vessel at a temperature that is below the first operating temperature to form a slurry with the hydrates.

31. (new) The process of claim 25 wherein cooling the dehydrated gas comprises introducing the dehydrated gas and a stream of liquid into the second vessel at a temperature that is below the second operating temperature to form a slurry or mixture with the sour contaminants.

32. (new) The process of claim 31 wherein dehydrating the natural gas feed stream comprises cooling the natural gas feed stream to a first operating temperature at which hydrates are formed, wherein cooling the natural gas feed stream comprises introducing the natural gas feed stream into the first vessel at a temperature that is below the first operating temperature.
33. (new) The process of claim 25 wherein dehydrating the natural gas feed stream comprises cooling the natural gas feed stream to a first operating temperature at which hydrates are formed, wherein cooling the natural gas feed stream comprises introducing the natural gas feed stream and a stream of liquid into the first vessel at a temperature that is below the first operating temperature to form a slurry with the hydrates, and cooling the dehydrated gas comprises introducing the dehydrated gas and a stream of liquid into the second vessel at a temperature that is below the second operating temperature to form a slurry or mixture with the sour contaminants.
34. (new) The process of claim 30 wherein the liquid is a natural gas liquid.
35. (new) The process of claim 31 wherein the liquid is a natural gas liquid.
36. (new) The process of claim 32 wherein the liquid is a natural gas liquid.
37. (new) The process of claim 33 wherein the liquid is a natural gas liquid.
38. (new) The process of claim 26 further comprising heating the hydrates in the first vessel to a temperature that is above the first operating temperature thereby producing a water-containing liquid.
39. (new) The process of claim 25 further comprising heating the sour species in the second vessel to a temperature that is above the second operating temperature thereby producing a sour species-containing liquid.
40. (new) The process of claim 26 further comprising heating the hydrates in the first vessel thereby producing a water-containing liquid and heating the sour species in the second vessel thereby producing a sour species-containing liquid.
41. (new) The process of claim 38 wherein heating the hydrates in the first vessel comprises adding to the hydrates a warm liquid.
42. (new) The process of claim 40 wherein heating the hydrates in the first vessel comprises adding to the hydrates a warm liquid.
43. (new) The process of claim 39 wherein heating the sour species in the second vessel comprises adding to the sour species a warm liquid.

- 44. (new) The process of claim 40 wherein heating the sour species in the second vessel comprises adding to the sour species a warm liquid.
- 45. (new) The process of claim 41 wherein the warm liquid is a natural gas liquid.
- 46. (new) The process of claim 42 wherein the warm liquid is a natural gas liquid.
- 47. (new) The process of claim 43 wherein the warm liquid is a natural gas liquid.
- 48. (new) The process of claim 44 wherein the warm liquid is a natural gas liquid.